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31-UUL-1998;
02-SEP-1998;
02-SEP-1998;
09-CCT-1998;
09-CCT-1998;
09-CCT-1998;
25-FEB-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             P-PSDB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WPI; 2000-062150/05.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Petersen J,
Tettelin H,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Neisseria meningitidis; Neisseria gonorrheae; antigen; vaccine; antigenic; diagnosis; immunogenic; infection; meningitis; septicaemia; antibacterial; gene therapy; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Fraser C,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (CHIR ) CHIRON CORP. (GENO-) INST GENOMIC RES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              30-APR-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Neisseria gonorrheae
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               11-NOV-1999.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             21-MAR-2000 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  254510 standard; DNA; 1500 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Neisseria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Z54510;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Galeotti C, Grandi G,
J, Pizza M, Rappuoli R,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              gonorrheae ORF 986 partial DNA sequence SEQ ID NO:2967
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Venter JC;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            98US-0093758
98US-0094869
98US-0098994
98US-0099062
98US-0103749
98US-0103794
98US-0103796
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Hickey E,
Ratti G,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEO ID NO.3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Masignani V,
Scalato E, (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Scarselli
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convel Neisseria meningitis and N. gonorrheae polynucleotides and compeptides. z54537 to z54576 and z54516 to z52473 represent pcr polypeptides. z54537 to z54576 and z54516 to z52473 represent pcr comparison and the present invention. The compositions of the present inventions of the present invention and be used as vaccines, as diagnostic reagents, and as compositions. The polypeptides can be used in the compositions of the present invention and as compositions. The polypeptides can be used in the compositions. The polypeptides can be used in the compositions of treating or preventing infection due to compositions. The polypeptides can be used to detect the composition bacteria, or to raise antibodies. They may also be used to screen for agonists or antagonists, which may themselves come use as antibacterial agents. The polypuccieotides of the invention way also be used in gene therapy protocols. Claim 7; Page 1389-1390; 1453pp; English.

Novel Neisserial polypeptides predicted to be useful antigens for vaccines and diagnostics -

3

Sequence 1500 BP; 384 A; 472 C; 379 G; 265 T; 0 other;

Query Match Best Local Similarity 99.5%; Score 1248; Pred. No. 0; DB 21; Length 1500;

Sequence

499 AA;

novel Neisseria meningitis and N. gonorrheae polynucleotides and polypeptides. 254337 to 254576 and 254616 to 255473 represent PCR primers used in the exemplification of the present invention. The polypeptides, the polynucleotides, antibodies and compositions of the invention can be used as vaccines, as diagnostic reagents, and as immunogenic compositions. The polypeptides can be used in the manufacture of medicaments for treating or preventing infection due to Neisserial bacteria (e.g. meningitis and septicaemia), to detect the presence of Neisseria bacteria, or to raise antibodies. They may also be used to screen for agonists or antagonists, which may themselves have use as antibacterial agents. The polynucleotides of the invention may also be used to gene therapy protocols.

riheae ORF 986 protein sequence SEQ ID NO: 2968

1999;26: 99WO-US09346.

FEB-1999; 99US-0121528

19-2000-062150/05.

151

GGATGTCCAATCCGATGTCGCCCTTCTGAAAATCGACGCAACGGAAGAGC

rAspValGlnSerAspValAlaLeuLeuLysIleAspAlaThrGluGluL

euProValValLysIleGlyAsnProLysAsnLeuLysProGlyGluTrp TACCCGTCGTCAAAATCGGCAATCCCAAAAATTTGAAACCGGGCGAATGG

200 600 184 167

AAAGTCCTGCTCAACGACAAGCGCGAATATACCGCCAAACTCATCGGTTC 500

snGlyTyrIleLeuThrAsnThrHisValValAlaGlyMetGlySerIle

ACGGCTACATCCTGACCAATACCCACGTCGTTGCCGGTATGGGCAGTATC 450 uAlaAspAspGlyGlyLeuAsnPheGlySerGlyPheIleIleSerLysA 134 AGCAGATGACGGCGGATTGAACTTCGGTTCGGGCTTCATCATCAGCAAAA 400

117

101

GluPhePheLysArgLeuValProAsnMetProGluIleProGlnGluGl

XX:02 279 46 7... CCun 254536, 254577 to 254615, and Y74253 to Y75941 represent

Protein,

499 Ŗ

SEB 1D No. 3

ingitidis; Neisseria gonorrheae; antigen; vaccine;
agnosis; immunogenic; infection; meningitis; septicaemia;

980S-0083758. 1934 980S-0094869.

3) CHIRON CORP.

Plane of Plane of C. Grandi G. Plane of Petersen J, Plaza Metersen J, Plaza Metersen J, Venter JC; Grandi G, ₽, Hickey Ratti ំ ដ Masignani V, Scalato E, Scarselli M;

Tell Wellsberial polypeptides predicted to be Welnes and diagnostics useful antigens for

aim 2; Page 1390; 1453pp; English. 1490 P

Pri Mar 23 "

alignment_block: alignment_scores: Align seg 1/1 to: Y75748 from: 1 to: 499 US-09-388-090-3 Percent Similarity: 100.000 201 AGTCGTCAATATTCAGGCAGCCCCGCCCCGCGCACCCAAAACGGCAGCG 250 101 AAGCATCCTTCGTAGAACGCATCGAACACACAAAGACGACGGCAGTGTC 150 301 GAATTTTTCAAACGCCTCGTCCCGAACATGCCCGAAATCCCCCAAGAAGA 350 151 AGTATGCTGCTGCCCGACTTTGCCCCAACTGGTTCAAAGCGAAGGCCCGGC 251 GCAATGCCGAAACCGATTCCGACCCGCTTGCCGACAGCGACCCGTTCTAC 300 84 lyAsnAlaGluThrAspSerAspProLeuAlaAspSerAspProPheTyr 100 67 51 34 luAlaSerPheValGluArgIleGluHisThrLysAspAspGlySerVal 17 uLeuAlaGlyCysGluLysAlaGlySerPhePheGlyAlaAspLysLysG 51 GCTGGCAGGCTGCGAAAAGGCAGGCAGCTTTTTCGGTGCGGACAAAAAAG 100 1 ValPheLysLysTyrGlnTyrPheAlaLeuAlaAlaLeuCysAlaAlaLe GTGTTCAAAAAATACCAATACTTCGCTTTTGGCGGCACTGTGTGCCGCCTT aValValAsnIleGlnAlaAlaProAlaProArgThrGlnAsnGlySerG 84 SerMetLeuLeuProAspPheAlaGlnLeuValGlnSerGluGlyProAl Quality: Ratio: 451.00 1.000 Percent Identity: 100.000 50 ŭ 17 67

1151 TCACAATCAAAGCCAAGCTGGGCAACGCCGCCGAGCATACCGGCGCATCA 1200 1351 AGG 1353 451 Arg TTCAACTTAAAAGGACAGGTCGTCGGCATCAATTCGCAAATATACACCCG 800 GTCGCTGCCATCGGCGCCCCTTCGGCTTTGACAACAGCGTGACCGCGGG 650 CTGGGCGTGATTATTCAGGAAGTATCCTACGGTTTGGCACAGTCGTTCGG 950 AACACCTCGTCGTCGTACGGGTTTCCGACGCGGCAGACGCGCAGGCTTA 1350

bacteraemia;

meningitis;

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9 끙 Ş В Ş

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12

standard; DNA;

entry)

APR-1998;

99WO-EP02765 98GB-0008734

(SMIK) SMITHKLINE BEECHAM BIOLOGICALS

P-PSDB; WPI; 2000-052809/04

Novel polynucleotides and polypeptides from Neisseria meningitis to prepare vaccines against bacterial infections

Example 2; Page 81; 94pp; English

They can be used for diagnostics of diseases, particularly human diseases.

CC They can be used for diagnosis of disease, staging of disease, or central disease, or central disease, or components of genetic mutations, serotype, organism to drugs. The components of arrays which are useful for diagnostic and prognostic components of arrays which are useful for diagnostic and prognostic components of arrays which are useful for diagnostic and prognostic components of arrays which are useful for diagnostic and prognostic components of arrays which are useful for diagnostic and prognostic components of arrays which are useful for diagnostic and prognostic components of expeptides can be used to produce antibodies. The collapse stage of tagonists and array stage in the polypeptides, antibodies, agonists and tagonists and array stage in the cateriatal diseases such as upper respiratory tract infection, component and screening of antibacterial drugs. They are also used in the prevention of adhesion of bacteriatory tract underly proteins on in-dwelling devices, or to extracellular proteins on wounds, and to thus prevent tissue damage and/or block the normal progression of components in infections initiated other than by the implantation of in-dwelling devices or by other surgical techniques. The present sequence encodes a conserved BASB013-C polypeptide isolated from Neisseria meningitidis. BASB013 polynucleotides and polypeptides may be employed as research reagents and material for the discovery of treatments and diagnostics for diseases, particularly human diseases.

Sequence 1110 ₿P; 280 A; 350 C; 279 ູດ 201 Ŧ. 0 other;

76.18; 97.38;

Length 1110;

0

Ş 밁 Ş Query Match
Best Local Similarity
Matches 1079; Conser 52 62 gcgamanggcaggcagctttttcggtgcggacamamangangcatccttcglagamcqca 121 Conservative Score 1061; DB 21; Pred. No. 6.3e-278; 0; Mismatches 30; Indels 0; Gaps 19

> B Qy ф 20 B γ 밁 Ş 9 Вb δÕ B 8 Вþ Ş В 9 D_P 9 g 20 밁 dCl 밁 δõ 302 122122 422 362 362 302 242 182 122 542 482 482 602 602 1022 902 842 842 782 782 722 722 662 542 cygaayayctycccytcytcaaaatcyycaatcccaaagatttgaaaccyggcgaatggg 962 902 acqqcaqcqqcaatqccqaaaccqattccqacccqcttqccqacaqcqacccqttctacq ccgccaaaclcalcggltcggatglccaatccgatgtcgcccttctgaaaatcgacgcaa ccgccaaactcatcggttcggatgtccaatccgatgtcgccttctgaaaatcgacgcaa cccacgtcgttgccggtatgggcagtatcaaagtcctgctcaacgacaacgcgcgaatata gcggattgaacttcggttcgggcttcatcatcagcaaagacggctacatcctgaccaata gcggattgaacttcggttcgggcttcatcatcagcaaaaacggctacatcctgaccaata aatttttcaaacycctcytcccyaacatycccyaaatcccccaagaagaagaagcagatyacy togaacacaccaaaqacqacqqcaqcqtcaqtatqctqctqcccgactttqcccaactgg togaacacaccaaagacgacggcagtgtcagtatgctgctgcccgactttgcccaactgg cccacgtcgttaccqgcatgggcagtatcaaagtcctgctcaacgacaagcgcgaatata cggaagagctacccgtcgtcaaaatcggcaatcccaaaaatttgaaaccgggcgaatggg tcaatcegggeattceggeggeecyctgttcaacttaaaaggacaggtcgtcggcatca ccaaaggcagaagcctgcccaacgaaagctacacacccttcatccaaaaccgacgttgcca acgttgccatquatqtcgccgaacagctgaaaaacaccggcaaagtccaacgcgggacaac actogoaatatacagoogoagoggattoatgggcatttccttcgccatcccgattg attcgcaaalalacagccgcagcggcggattcatgggcatctcctttgccatcccgattg tcaatccgggcaactccggcggcccgctgttcaacttaaaaggacaggtcgtcggcatca ccaaaqqcaqaaqcctgcccaacgaaagctacacccttcatccaaaccgacgttgcca tcgccgccatcggcgcccttcggcttcgacaacagcgtgaccgccggcatcgtgccg tggqcgtgattattcaggaagtatcctacggtttggcacagtcgttcggtctggataaag ccgtcatggtcggcgccattacgccggga 1110 aggcgggcgacatcgtcctcagcctcgacggcggagaaatacgttcttccggcgaccttc acgittqccatqaatqtcqccqaacaqctqaaaaacaccggcaaagtccaacgcggacaac aggcgggcgacatcgtcctcagcctcgacggcggagaaatacgttcttccggcgaccttc ccggcggcgcactgattgccaaaatcctgcccggcagccccgcagaacgtgccggcctgc 181 421 301 301 241 181 361 721 661 601 601 541 541 481 481 421 361 721 661 1021 1021 841 781 781 901 901 841 961

Neisseria meningitidis. Neisseria meningitidis; BASB013; diagnosis; infection; vaccine; antibiotic; upper respiratory tract infection; bacteraemia; meningitis; invasive bacterial disease; antibacterial. Neisseria meningitidis strain ATCC 13090 BASB013 protein sequence. 21-FEB-2000 (first entry)

04-NOV-1999.

W09955872-A1.

23-APR-1998; 20-APR-1999;

98GB-0008734. 99WO-EP02765

(SMIK) SMITHKLINE BEECHAM BIOLOGICALS.

Ruelle J;

N-PSDB; 233306. WPI; 2000-052809/04

Novel polynucleotides and polypeptides from Neisseria meningitis used to prepare vaccines against bacterial infections

Claim 3; Page 77-78; 94pp; English.

Reisseria meningitidis. BASB013 polypeptide isolated from CC employed as research reagents and material for the discovery of treatments and diagnostics for diseases, particularly human diseases. CC determining response of an infectious organism to drugs. The CC polynucleotides may be used as a source for hybridisation probes, and cc determining of genetic mutations, serotype, organism or strain CC components of arrays which are useful for diagnostic and prognostic cc another so arrays which are useful for diagnostic and prognostic cc polypeptides can also be used in vaccine formulations, and to identify are bacteristatic) are useful for diagnostic and prognostic cc another solvention of diseases such as upper respiratory tract infection. CC invasive bacterial diseases such as upper respiratory tract infection. CC in the prevention of adhesion of bacterial drugs. They are also used co in development and screening of antibacterial drugs. They are also used co in the prevention of adhesion of bacterial drugs. They are also used co in the prevention of adhesion of bacterial drugs. They are also used co pathogenesis in infections initiated other than by the implantation of indvelling devices or to extracellular proteins on wounds, and to can development and screening of antibacteriatory tract infections initiated other than by the implantation of in-dwelling devices or by other surgical trachings. techniques

###8888888888888888888888888888

Sequence 8

alignment_scores: Quality: 127.00 Ratio: 1.000

127

Percent Similarity: 100.000 Percent Identity: 100.000

alignment_block: US-09-388-090-3 x Y52994

Align seg 1/1 to: Y52994 from: 1 to:

499

Sion of all

yLeuAlaGlnSerPheGlyLeuAspLysAla 321

sed name: //con2.2/ocadata/aopa

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100 9531549
       seq_documentation_block:
; Sequence 8, Application PC/TUS9506211
; GENERAL INFORMATION:
                   ENERAL INFORMATION:
APPLICANT:
TITLE OF INVENTION: METHODS AND COMPOSITIONS FOR DIAGNOSING
TITLE OF INVENTION: ROCHALIMAEA HENSELAE AND ROCHALIMAEA QUINTANA INFECTION
NUMBER OF SEQUENCES: 10
CORRESPONDENCE ADDRESS:
ADDRESCEP. NEEDLE & ROSENBERG, P.C.
                        ORNESPONDENCE ADDRESS:
ADDRESSEE: NEEDLE & ROSENBERG,P.C.
STREET: 127 Peachtree Street, Suite 1200
CITY: Atlanta
STATE: Georgia
COUNTRY: USA
                 COUNTRY: USA
ZIP: 30303

COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC COMpatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: PCT/US95/06211
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/245,294
FILING DATE: 18 MAY 1994
CLASSIFICATION:
ATTORNEY/ACENT INFORMATION:
NAME: Spratt, Gwendolyn D.
REGISTRATION NUMBER: 36,016
REFERENCE/DOCKET NUMBER: 1414.6121
TELECOMMUNICATION INFORMATION:
TELEPHONE: 404/688-9880
INFORMATION FOR SEO ID NO: 8:
SEQUENCE CHARACTERISTICS:
LENGTH: 503 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
PCT-US95-06211-8
 alignment_scores:
                                Quality: 8.00
Ratio: 1.000
                                                               8.00
                                                                                                              Length:
   Percent Similarity: 100.000
                                                                                Gaps: 0
Percent Identity: 100.000
alignment_block:
 US-09-388-090-3 x PCT-US95-06211-8
 Align seg 1/1 to: PCT-US95-06211-8 from: 1 to: 503
           640 GTGACCGCCGGCATCGTGTCCGCC 663
           illililililililililililililililili ValThrAlaGlyIleValSerAla 222
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1